



## LAND MOBILE COMMUNICATIONS COUNCIL

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September 11, 2000

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Magalie Roman Salas  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, TW-A325  
Washington, DC 20554

Re: Petition for Rule Making

Dear Ms. Salas:

Pursuant to Section 1.401 of the Federal Communications Commission's rules, the Land Mobile Communications Council (LMCC) hereby submits this Petition for Rule Making regarding low power operations on specified 12.5 kHz offset channel pairs in the 450-470 MHz band.

We believe that there is a broad range of support in the private wireless industry for LMCC's proposal and are hopeful that the submitted petition can form the basis for the Commission to issue a Notice of Proposed Rule Making to initiate the appropriate rule changes. In light of the needs of land mobile community, we urge the Commission to act expeditiously on this proposal.

If we can be of further assistance, please do not hesitate to contact us. We look forward to working with the Commission's staff to implement the necessary rule changes.

Sincerely,



Mark E. Crosby  
Secretary

Enclosure

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In the Matter of )

1998 Biennial Regulatory Review — )  
47 C.F.R. Part 90 - Private Land Mobile )  
Radio Services )

WT Docket No. 98-182

Replacement of Part 90 by Part 88 to Revise )  
the Private Land Mobile Radio Services and )  
Modify the Policies Governing Them )  
and )  
Examination of Exclusivity and Frequency )  
Assignment Policies of the Private Land )  
Mobile Services )

PETITION FOR RULE MAKING  
OF  
THE LAND MOBILE COMMUNICATIONS COUNCIL

The Land Mobile Communications Council ("LMCC"), pursuant to Section 1.401 of the Commission's Rules, 47 C.F.R. § 1.401, hereby respectfully submits this Petition for Rule Making, which seeks to amend Section 90.267 of the Commission's Rules as detailed herein.

The LMCC is a non-profit association of organizations representing virtually all users of land mobile radio systems, providers of land mobile services, and manufacturers of land mobile radio equipment. The LMCC acts with the consensus, and on behalf, of the vast majority of public safety, business, industrial, private, commercial and land transportation radio users on several frequency bands regulated by the FCC. Key to these operations are those bands included in the so-called "Refarming" proceeding. LMCC has been an active participant in all phases of this complex and

extended proceeding; the efficient use of the refarmed bands is of paramount importance to the LMCC and its members. Membership includes the following organizations:

- Affiliated American Railroads (AAR)
- Aeronautical Radio, Inc. (ARINC)
- American Association of State Highway and Transportation Officials (AASHTO)
- American Automobile Association (AAA)
- American Mobile Telecommunications Association, Inc. (AMTA)
- American Petroleum Institute (API)
- American Trucking Associations, Inc. (ATA)
- Association of Public Safety Communications Officials-International, Inc. (APCO)
- Central Station Alarm Association (CSAA)
- Forest Industries Telecommunications (FIT)
- Forestry-Conservation Communications Association (FCCA)
- Industrial Telecommunications Association, Inc. (ITA)
- Intelligent Transportation Society of America, Inc. (ITSA)
- International Association of Fire Chiefs (IAFC)
- International Association of Fish and Wildlife Agencies (IAFWA)
- International Municipal Signal Association (IMSA)
- International Taxicab and Livery Association (ITLA)
- Manufacturers Radio Frequency Advisory Committee (MRFAC)
- National Association of State Foresters (NASF)
- Personal Communications Industry Association (PCIA)
- Telecommunications Industry Association (TIA)
- United Telecom Council (UTC)

## **I. BACKGROUND**

On June 15, 1995, the Commission adopted a *Report and Order* in PR Docket No. 92-235, to promote more efficient use of the private land mobile radio (PLMR) spectrum below 512 MHz.<sup>1</sup> Under the rules adopted, channels in the 450-470 MHz band that were 12.5 kHz removed from regularly-assignable channels and reserved for low power operation under former Section

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<sup>1</sup> See Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Radio Services, PR Docket No. 92-235, *Report and Order*, 10 FCC Rcd 10076 (1995).

90.267 of the rules ("12.5 kHz offset channels"), were reclassified as regularly assignable channels available for high power operation. In making this change, however, the Commission recognized the continuing need for low power channels and tasked the Part 90 frequency coordinators with devising a low power plan through industry consensus.

On March 12, 1997, the Commission adopted a Second Report and Order in the Refarming proceeding that consolidated the twenty PLMR services into two pools – a Public Safety Pool and an Industrial/Business Pool.<sup>2</sup> In consolidating the PLMR services, the Commission pointed out the importance of low power channels and gave the frequency coordinators until October 17, 1997, to develop a consensus plan for low power operations in the two pools.

On June 4, 1997, LMCC submitted a plan for low power and full power operations on the 12.5 kHz offset channels in the 450-460 MHz band ("Consensus Plan"). LMCC asked the Commission to endorse the Consensus Plan.<sup>3</sup>

The Consensus Plan submitted by LMCC included among its recommendations a request that certain frequencies have an ERP limitation higher than the 2 watt limitation ordinarily imposed by Section 90.267, but lower than the typical "full power" station in the band. Other LMCC recommendations address antenna height restrictions, geographic-use restrictions, and frequency coordination requirements. The Commission stated that it believed that implementing the Consensus Plan, as submitted, would require changes to the Commission's Rules, and therefore the plan did not appear to constitute the type of Consensus Plan originally envisioned by the

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<sup>2</sup> See Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Radio Services, PR Docket No. 92-235, *Second Report and Order*, 12 FCC Rcd 14307 (1997).

<sup>3</sup> See Letter dated June 4, 1997, from Larry Miller, President, LMCC to Daniel Phythyon, Acting Chief, Wireless Telecommunications Bureau, Federal Communications Commission.

Commission. The LMCC subsequently modified its plan. The “modified” Consensus Plan, submitted August 21, 1997, reserves 104 of the current 12.5 kHz offset channel pairs (and channel pairs 6.25 kHz directly above and below these channel pairs) specifically for low power operation – ninety (90) channel pairs in the Industrial/Business Pool and fourteen (14) channel pairs in the Public Safety Pool.

On June 29, 2000, the Commission accepted LMCC’s modified low power Consensus Plan. The Commission pledged to license only low power operations on the specified frequencies pursuant to Section 90.267 of the Commission’s Rules, 47 C.F.R. § 90.267. The Commission required that each frequency coordinator maintain a current listing of frequencies designated for low power and make it available to the public upon request. As noted in the Refarming proceeding, the coordinators, by consensus, may change this list in the future.<sup>4</sup>

## **II. PETITION FOR RULE MAKING**

LMCC requests that the Commission amend Section 90.267 to specify the changes discussed herein with regard to the frequencies listed in the appendices attached hereto. This Petition is consistent with the originally filed LMCC Consensus Plan.

As addressed more fully later in this document, LMCC’s plan would provide users a variety of implementation and regulatory status options. For example, existing low power users could move to designated low power channels or remain on channels ultimately used for full power operation.

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<sup>4</sup> Such changes will become effective thirty (30) days after notification to the Wireless Telecommunications Bureau, by letter, of the planned changes.

In developing a proposal to accommodate a variety of low power users, it was necessary to understand the environment which already exists for low power users. Today the 450-470 MHz band offset channels support thousands of these low power users with 25 kHz equipment. These existing systems are on channels which are spaced 12.5 kHz from the long-standing “primary” full power channels, and only 6.25 kHz from the new 6.25 kHz drop-in channels created in the Commission’s refarming proceeding. Within the low power category, a wide variety of operations are deployed and different coordination techniques have been used, each responsive to particular types of low power use.

For example, industrial operations, manufacturing plants, and some businesses use the low power channels for in-plant and on-campus communications, including both voice and remote control of heavy machinery. Also, these channels support traffic control in highway construction corridors. Site-specific coordination provides users some degree of interference protection in the shared spectrum environment prevalent throughout the 450-470 MHz band. Because industrial/manufacturing complexes often represent a hostile radio environment, these low power users have found that the current 2 watt maximum ERP is too limiting within their complexes and desperately need for the ERP limitation to be increased slightly to provide more reliable communications.

Other businesses, such as the construction trades, deploy the channels for operations which are more itinerant in nature and for which site-specific coordination would provide little benefit to the user. In addition, many small businesses deploying radios for on-site use are anxious to minimize costs, including those resulting from regulatory requirements.

As noted above, a variety of uses exist for low power operations. Therefore, LMCC is requesting amendment of Section 90.267 of the Commission's Rules to implement a plan responsive to these requirements to the degree possible in this shared environment. Lists of specific channels for the various categories of low power use are attached as Appendices A through E.

**I. Recommendations for Industrial/Business and Public Safety Pools:**

**1. Specify 50 - 12.5 kHz 450-470 MHz channel pairs for low power coordinated use:**

- Target Market: Those low power users who need some degree of protection at a given site; e.g.; campus environments, manufacturing plants, etc.

- Maximum power of 5 watts ERP mobile/portable, 20 watts ERP base stations with maximum fixed station antenna height of 23 meters (75 feet) above ground level. As shown in Appendix A, 10 of these 50 channels are so designated on a nationwide basis with the remaining 40 channels designated for coordinated low power use within a 80 km (50 mile) radius of the top 100 urban areas. For sites beyond 80 km (50 miles) outside the top urban areas, full power is allowed on the 40 channels in accordance with frequency coordination procedures. This gives low power "protection" from full power stations, but allows full power operation in less urbanized areas without the need for waivers.

- Site specific coordination and licensing required for all systems.

- Specific channels for this category are listed in Appendix A.

**2. Specify 10 - 12.5 kHz 450-470 MHz channel pairs for low power non-voice coordinated use nationwide:**

- Target Market: Those low power users employing wireless non-voice transmitters for remote control of cranes, robotics, etc. who need protection at a given site, and whose operations could suffer significant safety hazards if shared with voice operations. To maximize spectrum use, however, voice operations could be allowed on a secondary non-interference coordinated basis; any such use would be subject to removal should interference to non-voice operations occur.

- Maximum power of 2 watts ERP. Maximum antenna height of 7 meters (20 feet) above ground level for any fixed station.

- Site specific coordination and licensing are required for all systems.

- Specific channels for this category are listed in Appendix B.

**3. Maintain a 2 watt power limit on the 5 “offset” channel pairs designated for central station alarm use, and allow customer premises equipment operating on these channels to be licensed as mobiles.<sup>5</sup>**

- Specific channels for this category are listed in Appendix C.

**4. Specify 25 - 12.5 kHz 450-470 channel pairs for low power non-coordinated itinerant use nationwide:**

- Target Market: small business use, e.g., electricians, plumbers, others needing itinerant on-site communications or able to share with these users.

- Maximum power of 2 watts ERP and will be licensed as mobile, but may serve the functions of base, fixed, or mobile relay stations. Maximum antenna height of 7 meters (20 feet)

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<sup>5</sup> We note that three of the frequency pairs: 460.9125 MHz, 460.9375 MHz, and 460.9625 MHz are available for general industrial/business use outside 75 miles of the major metropolitan areas. Accordingly, we request that non-central station users outside the 75 mile limitation be permitted to license for specific use, not just as mobiles. The 20 foot above structure rule of Section 90.267(a)(7)(ii) would continue to govern antenna height for these channels.



above ground level for any fixed station.

- New type acceptance grants for transmitters on these channels would specify that units must be capable of operation only on these 25 low power uncoordinated channels and on other UHF “dot/star” channels (464.5/469.5, 464.55/469.55, 467.85, 467.875, 467.9 and 467.925 MHz already used for similar low power and /or itinerant operations). This will help protect full power coordinated channels from additional co-channel conflicts that might occur from uncoordinated users.

- Licensing is required, but coordination is not required.

- Specific channels for this category are listed in Appendix D.

**5. Specify 14 - 12.5 kHz 450-470 MHz (offset) channel pairs in the Public Safety Pool for low power coordinated use nationwide.**

- Maximum power of 5 watts ERP for all stations. Maximum antenna height of 20 feet (7 meters) above ground level for any fixed station.

- Site specific and station class specific coordination and licensing required.

- Specific channels in this category are listed in Appendix E.

**6. Provide the same low power designations on the 6.25 kHz channels immediately above and below the 12.5 kHz channels chosen for all five low power categories for both Industrial/Business and Public Safety Pools.**

### **III. CONCLUSION**

As the Commission has long recognized, LMCC represents the land mobile radio community. The Commission challenged LMCC to create a workable, low power pool plan by

a specified deadline, a deadline which LMCC not only met, but which LMCC also bested by several months. LMCC's original proposal included the changes requested herein, but the Commission believed that these changes went beyond LMCC's original charge from the Commission.

These proposed rule changes, while minor in the grand scheme of the Commission's regulatory efforts, are critical to the success of the Commission's goal of making the 450-470 MHz band more efficient for all land mobile users. Therefore, LMCC respectfully requests that the Commission expedite the issuance of a Notice of Proposed Rule Making and "fast-track" its consideration of the proposals contained herein.

WHEREFORE, the premises considered, it is respectfully requested that the Commission act in accordance with the views expressed herein.

Respectfully Submitted,

*Michele Farquhar, Esq.*

Michele Farquhar, Esquire  
President

**Land Mobile Communications Council**  
1110 North Glebe Road, Suite 500  
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(703) 528-5115

Date: September 11, 2000

## APPENDIX A

### Industrial/Business

#### 50 Channel, Coordinated, Low Power Pool

451.1875	456.1875	452.1125	457.1125
451.2375	456.2375*	452.1375	457.1375
451.2875	456.2875	452.1625	457.1625
451.3125	456.3125	452.1875	457.1875
451.3375	456.3375*	452.2875	457.2875
451.3625	456.3625	452.3125	457.3125*
451.3875	456.3875	452.4125	457.4125*
451.4125	456.4125	452.4875	457.4875
451.4375	456.4375*	452.5125	457.5125*
451.4625	456.4625	452.5375	457.5375**
451.4875	456.4875	452.6375	457.6375
451.5125	456.5125	452.6625	457.6625
451.5375	456.5375*	452.6875	457.6875
451.5625	456.5625	452.7125	457.7125
451.5875	456.5875	452.7625	457.7625*
451.6125	456.6125	452.7875	457.7875
451.6375	456.6375*	452.8125	457.8125
451.6625	456.6625	452.8375	452.8375
451.6875	456.6875	452.8625	457.8625*
451.7125	456.7125	452.8875	457.8875
451.7375	456.7375	452.9875	457.9875
451.7625	456.7625	462.1875	467.1875
452.0375	457.0375	462.4625	467.4625
452.0625	457.0625	462.4875	467.4875
452.0875	457.0875	462.5125	467.5125

\* Indicates frequency pairs that are available nationwide

\*\* Indicates that coordinators must seek concurrence from AAA for use of these frequencies pursuant to the *Second Memorandum Opinion and Order* in Docket 92-235, FCC 99-68 (1999).

In addition to the channels listed above, the same low power designations apply to the channels 6.25 kHz immediately above and below these channels.

**Industrial/Business**

**10 Channel, Non-Voice, Coordinated Low Power Pool**

462.2125	467.2125
462.2375	467.2375
462.2625	467.2625
462.2875	467.2875
462.3125	467.3125
462.3375	467.3375
462.3625	467.3625
462.3875	467.3875
462.4125	467.4125
462.4375	467.4375

In addition to the channels listed above, the same low power designations apply to the channels 6.25 kHz immediately above and below these channels.

**Industrial/Business**

**5 Channel, Central Station Alarm, Low Power Pool**

460.9125	465.9125
460.9375	465.9375
460.9625	465.9625
460.9875	465.9875
461.0125	465.0125

In addition to the channels listed above, the same low power designations apply to the channels 6.25 kHz immediately above and below these channels.

## APPENDIX D

### Industrial/Business

#### 25 Channel, Uncoordinated, Low Power Pool

461.0375	466.0375
461.0625	466.0625
461.0875	466.0875
461.1125	466.1125
461.1375	466.1375
461.1625	466.1625
461.1875	466.1875
461.2125	466.2125
461.2375	466.2375
461.2625	466.2625
461.2875	466.2875
461.3125	466.3125
461.3375	466.3375
461.3625	466.3625
462.7625	467.7625
462.7875	467.7875
462.8125	467.8125
462.8375	467.8375
462.8625	467.8625
462.8875	467.8875
462.9125	467.9125
464.4875	469.4875
464.5125	469.5125
464.5375	469.5375
464.5625	469.5625

In addition to the channels listed above, the same low power designations apply to the channels 6.25 kHz immediately above and below these channels.

## APPENDIX E

### Public Safety

#### 14 Channel, Coordinated, Low Power Pool

453.0375	458.0375
453.0625	458.0625
453.0875	458.0875
453.1125	458.1125
453.1375	458.1375
453.8875	458.8875
453.9125	458.9125
453.9375	458.9375
453.9625	458.9625
453.9875	458.9875
460.4875	465.4875
460.5125	465.5125
460.5375	465.5375
460.5625	465.5625

In addition to the channels listed above, the same low power designations apply to the channels 6.25 kHz immediately above and below these channels.